

## **Consultation on a successor to the Strategy for Science, Technology and Innovation**

### **Response from Dublin City University, March 2015**

DCU welcomes the opportunity to comment on the consultation paper issued by the Interdepartmental Committee on Science, Technology and Innovation.

DCU endorses the separate submission made by the Irish Universities Association on behalf of the seven universities. The comments below complement the input in the IUA submission.

#### ***Investment in STI***

DCU supports ambitious goals for innovation across all sectors in Ireland. However, the creation of a growing pool of talented and skilled graduates is likely to be affected badly by the decrease in core funding to the universities that has been happening since 2006. The quality of the student experience is directly influenced by the staff-student ratio and indirectly by the education provided by research-intensive universities. Both aspects require an increase in core funding to universities in order to provide sufficient numbers of well-qualified graduates to support national ambitions for STI.

#### ***Prioritised approach to public research funding***

By positioning itself as a University of Enterprise, DCU is comfortable with investment being channelled towards agreed national priorities that match economic objectives. However, the possible move to even finer-grained descriptions of priority areas carries dangers of micromanagement and of restricting interests to what is short-term and, therefore, foreseeable. It is recommended that broader priority areas are set to allow for flexible responses to changing environments.

Underpinning the priority areas is the base of knowledge from less goal-directed research. Maintaining a strong foundation of basic science is critical for Ireland's developing reputation as a country contributing to knowledge generally and not just to applications of knowledge. It is recommended that a clearly-defined proportion of research funds from exchequer sources should be reserved for support of research excellence in any discipline; an appropriate proportion might be of the order of 25%.

#### ***Enterprise-led R&D***

DCU supports measures that will encourage firms to undertake more R&D. There is still a communication gap between enterprises that do, or could be doing, R&D and HEIs with potentially relevant expertise. It is recommended that Knowledge Transfer Ireland (KTI) is strengthened so that it functions not just as a shop window for existing technologies from the HE sector but also as a matchmaker for firms seeking R&D assistance. Further, it is recommended that Enterprise Ireland and the IDA make information they have about R&D needs of firms more readily accessible to HEIs, either directly or via KTI.

### ***International collaborations***

DCU is vigorously engaged in international collaborations with other universities and with overseas enterprises. It has a university-wide strategy for participating in Horizon 2020 and other European opportunities. DCU has separately made comments to the study on membership of international organisations. While looking internationally for opportunities to develop its research and innovation activities, DCU also believes that international funding supplements, but cannot replace national funding.

### ***Enhancing research excellence and delivering jobs***

DCU has reorganised the structures that support its research and innovation activities so that there is closer alignment with national and European priorities and to make sure that internal resources are directed at enhancing research excellence and at translating knowledge into societal and economic benefits. DCU is developing its Innovation Campus to bring research-performing companies physically close to DCU and to create an ecosystem that will boost interaction with and between firms and lead to job creation.

DCU has also made major adjustments to its undergraduate curriculum by embedding a set of graduate attributes that were developed in close consultation with industry. DCU graduates are now even better prepared than before to be valuable contributors to society.

DCU is also pioneering entrepreneurship at all levels, with very visible successes in its UStart student entrepreneurship programme. These efforts are supported by philanthropy and internal resources. It is recommended that additional funding should be made available from appropriate state agencies to further extend entrepreneurship and innovation training in universities.

Infrastructure needs are being explored through a separate consultancy study and DCU will be participating in that study. In common with all HEIs, DCU is challenged to maintain its high quality research environment, let alone gear up for future needs. While DCU is engaged with partner institutions in sharing access to large-scale infrastructure and to have integrated replacement policies for major equipment, additional state support for infrastructure is needed. It is recommended that a further round of PRTL funding is made available.

DCU also contributes to several SFI research centres and Enterprise Ireland technology centres. DCU would welcome better integration between such centres, but recognises that this could be a natural evolutionary process. The embedding of such centres in the Higher Education environment is critical for their success because the centres need the constant refreshment that comes from closely linked research-intensive institutions and a critical mass of research performers. Further distancing research centres from the sources of knowledge creation is counter to international trends and is likely to result in centres becoming pale imitations of commercial Contract Research Organisations of limited scope or value. It is recommended that the EI technology centres and SFI research centres are mandated to explore closer links and to develop approaches to links with industry that can satisfy both long-term and short-term needs.

### ***IP regime***

The Technology Transfer Strengthening Initiative (TTSI) has provided Irish institutions with resources to develop robust and flexible means to identify, protect and exploit IP. DCU welcomes the statement that proposals will be developed during 2015 for the continued support of the Technology Transfer system.

However, a critical element is that funding has to be sufficient to maintain patent protection during the development of technology to the point that it is industry- or investor-ready. The reduced budgets to HEIs under TTSI2 mean that patent applications are being allowed to lapse simply because they are too expensive to maintain rather than because the protected technology has little value. It is, therefore, recommended that funds for maintaining patents are increased.

### ***Government-wide goals for job creation and societal benefit***

DCU is fully committed to translating knowledge into societal benefits. To this end, it has created a cross-cutting activity, the Societal Impact Platform (SIP) that is developing best-practice guidance for 'responsible research and innovation' that will be used across all four faculties. Through the SIP team, DCU is engaging with European and US partners to develop and embed the responsible research and innovation approach. It is recommended that future policies developed by government agencies make explicit mention of the responsible research and innovation imperative.

### ***Human capital***

This perhaps should be the first and most important pillar of a future strategy. DCU's approach via its graduate attributes initiative has been mentioned earlier, and the development of a researcher career framework is underway in DCU. In addition, attention needs to be given to PhD students. While the quality of training in transferable skills is being improved by the widespread introduction of structured PhD programmes, the basic support from the State for PhD training in HEIs has been weakened in recent years. It is not clear how funding agencies and the HEA will better support the recently adopted National Framework for Doctoral Education. It is also not clear if there has been a policy decision on an optimum number of PhD graduates in Ireland. It is recommended that a study is undertaken to clarify these and related questions.